



# Aviation Investigation Final Report

<b>Location:</b>	HOUSTON, Texas	<b>Incident Number:</b>	FTW951A053
<b>Date &amp; Time:</b>	November 26, 1994, 11:02 Local	<b>Registration:</b>	N14336
<b>Aircraft:</b>	BOEING B-737-300	<b>Aircraft Damage:</b>	Minor
<b>Defining Event:</b>		<b>Injuries:</b>	134 None
<b>Flight Conducted Under:</b>	Part 121: Air carrier - Scheduled		

## Analysis

TWO MECHANICS WERE REPOSITIONING A BOEING 737-200, N11244, TO CONTINENTAL DEPARTURE GATE 41. THE LEFT SEAT MECHANIC DID NOT UTILIZE THE MECHANIC TAXI CHECKLIST. THIS MECHANIC SUBSEQUENTLY REPORTED DIFFICULTY IN NOSE WHEEL STEERING AND BRAKING. THE RIGHT SEAT MECHANIC OFFERED TO CALL MAINTENANCE; HOWEVER, THE OTHER MECHANIC DECLINED THE OFFER. AT THE TIME, FLIGHT 1176, A BOEING 737-300, N14336, FROM GATE 44 WAS UNDER CONTROL OF THE PUSHBACK TEAM. THE CREW OF THE PUSHBACK AIRPLANE AND WITNESSES REPORTED THE REPOSITIONING AIRPLANE ENGINES WERE AT 'A VERY HIGH POWER SETTING' AND 'TAXIING AT A HIGH RATE OF SPEED.' THE RIGHT WING OF AIRPLANE N11244 WAS SUBSTANTIALLY DAMAGED WHEN IT HIT THE LEFT OUTBOARD FLAP AREA OF N14336. THE HYDRAULIC SYSTEMS FOR THE NOSE WHEEL STEERING, THE MAIN WHEEL STEERING, THE MAIN WHEEL BRAKES, AND THE THRUST REVERSERS WERE FUNCTIONALLY TESTED AND FOUND OPERATIONAL.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: THE FAILURE OF MAINTENANCE PERSONNEL TO FOLLOW THE TAXI CHECKLIST RESULTING IN THE HYDRAULIC PUMPS NOT BEING TURNED ON.

## Findings

Occurrence #1: ON GROUND/WATER COLLISION WITH OBJECT  
Phase of Operation: STANDING - STARTING ENGINE(S)

Findings

1. OBJECT - AIRCRAFT MOVING ON GROUND
2. (C) HYDRAULIC SYSTEM,PUMP - NOT ENGAGED
3. (C) CHECKLIST - NOT FOLLOWED - COMPANY MAINTENANCE PERSONNEL

## Factual Information

On November 26, 1994, at 1102 central standard time, a Boeing 737-300, N14336, Continental Airlines Flight 1176, received minor damage during a ground collision at the Intercontinental Airport, Houston, Texas. The crew of 6 and 128 passengers were not injured. Visual meteorological conditions prevailed for the scheduled Title 14 CFR Part 121 flight to Chicago, Illinois.

Two mechanics were repositioning a Boeing 737-200, N11244, to Continental departure gate 41. Simultaneously, Flight 1176, a Boeing 737-300, from gate 44 was under the control of the pushback team consisting of a tug driver and a wingwalker. The right wing of N11244 contacted the left outboard flap, cockpit crew, in the process of starting engine #1, felt the impact, aborted the engine start, and looked aft from the cockpit window. The passengers were deplaned out of the right forward door utilizing portable stairs.

During interviews, conducted by the investigator-in-charge and the operator, with the left seat (lead) mechanic, the following information was revealed. The mechanic taxi checklist was not utilized. He was unable to verify by discussion the "ON" position of the cockpit hydraulic pump switches for the Boeing 737-200 versus the 737-300, which are not in the same sequence in the cockpit. He reported difficulty in nose wheel steering and braking with N11244.

During interviews, conducted by the investigator-in-charge and the operator, with the right seat mechanic, the following information was revealed. He offered to call maintenance following an indication by the left seat mechanic of a nose wheel steering problem; however, that mechanic declined the offer.

On the enclosed statements the crew and witnesses stated that the repositioning aircraft engines were at "a very high power setting" and "taxing at a high rate of speed."

The hydraulic systems (enclosed report) for the nose wheel steering, the main wheel steering, the main wheel brakes, and the thrust reversers were functionally tested. It was determined by the test that 5 brake applications were available from the accumulator of the "A" hydraulic system and that 6 brake applications were available from the accumulator of the "B" hydraulic system. The nose wheel steering, the thrust reversers, and the main landing gear brakes functioned.

Toxicological findings, initiated by the operator, for the mechanics and ground crew were negative.

## Pilot Information

<b>Certificate:</b>	Airline transport	<b>Age:</b>	51, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	November 7, 1994
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	20000 hours (Total, all aircraft), 8000 hours (Total, this make and model), 15000 hours (Pilot In Command, all aircraft), 210 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BOEING	<b>Registration:</b>	N14336
<b>Model/Series:</b>	B-737-300 B-737-300	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	23574
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	134
<b>Date/Type of Last Inspection:</b>	November 26, 1994 Continuous airworthiness	<b>Certified Max Gross Wt.:</b>	135000 lbs
<b>Time Since Last Inspection:</b>	0 Hrs	<b>Engines:</b>	2 Turbo fan
<b>Airframe Total Time:</b>	26118 Hrs	<b>Engine Manufacturer:</b>	CFM
<b>ELT:</b>		<b>Engine Model/Series:</b>	56
<b>Registered Owner:</b>	STATE STREET BANK AND TRUST	<b>Rated Power:</b>	20000 Lbs thrust
<b>Operator:</b>	CONTINENTAL AIRLINES, INC.	<b>Operating Certificate(s) Held:</b>	Flag carrier (121)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	CALA

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	IAH ,98 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	09:50 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 4500 ft AGL	<b>Visibility</b>	6 miles
<b>Lowest Ceiling:</b>	Unknown	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	150°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	22°C / 22°C
<b>Precipitation and Obscuration:</b>	N/A - None - Fog		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	CHICAGO , IL (ORD )	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	00:00 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	HOUSTON INTERCONTINENTAL IAH	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	98 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	6 None	<b>Aircraft Damage:</b>	Minor
<b>Passenger Injuries:</b>	128 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	134 None	<b>Latitude, Longitude:</b>	29.76057,-95.379623(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Smith, Joyce
<b>Additional Participating Persons:</b>	JAMES R WATSON; HOUSTON , TX
<b>Original Publish Date:</b>	June 29, 1995
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=19261">https://data.nts.gov/Docket?ProjectID=19261</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).